

## Calcium Phosphate and Bioglass Materials for Bone Implant Applications

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### Message from the Guest Editors

At present, many research labs focus their works on improving the osseointegration of bone implants by modifying the surface of prosthetic alloys with bioactive coatings made of calcium phosphate or bioglass. These coatings support the bone cells' growth at the surface of the implant, promoting the formation of an intimate link with the surrounding bone tissues.

Several methods can be used to synthesize bioactive coatings on prosthetic alloys such as plasma spraying, magnetron sputtering, pulsed laser-deposition, electrophoretic deposition or electrodeposition. Particularly, the low-temperature processes can be used to add organic components (polymers, proteins, drugs, etc.) inside the prosthetic coatings in order to enhance the biological and mechanical properties of the biomaterials.

The topics of interest include but are not limited to:

- Calcium phosphate coatings for bone implant applications;
- Bioglass coatings for bone implant applications;
- Functionalization of biomaterials;
- Bone implants with enhanced biological properties;
- Bone implants with enhanced mechanical properties.



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## Message from the Editorial Board

Now more than ever, research is called for to produce technologies and improve knowledge to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed at the center of most contemporary research. Surface science and engineering play a key role in this regard. Refining surfaces and their modifications provides new materials, architectures and processes with a huge potential to aid most societal challenges. *Coatings* is a well-established, peer-reviewed, online journal that focuses on the dissemination of publications in the field of surface science and engineering. *Coatings* publishes original research articles that report cutting-edge results and review papers on the hottest topics.

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